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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/075,503	02/14/2002	Tapio Kuiri	490-010231-US(PAR)	8788

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EXAMINER

LE, NHAN T

ART UNIT PAPER NUMBER

2685

DATE MAILED: 07/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/075,503

Applicant(s)

KUIRI, TAPIO

Examiner

Nhan T Le

Art Unit

2685

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-9 and 11-14 is/are rejected.
- 7) ☒ Claim(s) 5, 10, 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 6 disclose a monitor of a sensor system for obtaining the operating temperature of a power amplifier of a radio telephone and a transceiver for a radio telephone for sending and receiving radio signals within a communication network in which the monitor connected to the power amplifier at the input of the bias supply circuit for sensing a voltage indicative of the voltage drop across the transistor. However, as specified in the specification, fig. 1, number 25 discloses the monitor connected to the power amplifier at the output of the bias supply circuit for sensing a voltage indicative of the voltage drop across the transistor.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-4, 6-9, 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winslow (US 6,194,968) in view of Budnik (US 6,043,707).

As to claim 1, Winslow teaches a sensor system for obtaining the operating temperature of a power amplifier of a radio telephone, the power amplifier having at least one transistor (see fig. 1, col. 3, lines 9-26, fig. 2, numbers 142, 144, 146, col. 3, lines 46-56), the sensor system comprising: a bias supply circuit connected to the power amplifier for supplying a bias current to the power amplifier (see fig. 2, number 150, col. 4, lines 40-55, fig. 3, col. 5, lines 5-22); and a processor for generating a signal indicative of the operating temperature of the power amplifier in response to the sensed voltage (see fig. 2, number 170, col. 4, lines 40-55, fig. 3, col. 5, lines 5-22). However, Winslow fails to teach a monitor connected to the power amplifier at the input of the bias supply circuit for sensing a voltage indicative of the voltage drop across the transistor. Budnik teaches a monitor connected to the power amplifier at the input of the bias supply circuit for sensing a voltage indicative of the voltage drop across the transistor (see col. 5, lines 60-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Budnik into the system of Winslow in order to improve the performance of the variable amplifiers.

As to claims 2-4, the combination of Winslow and Budnik also teaches a sensor system for obtaining the operating temperature of a power amplifier of a radio telephone, the power amplifier having at least one transistor, wherein a temperature control algorithm causes the processor to adjust the operation of the radio telephone in response to the operating temperature signal (see Winslow col. 5, lines 24-39); causes the processor to shut off the radio telephone when the operating temperature signal exceeds a predetermined value (see Winslow col. 4, line 9-21, col. 6, lines 1-26);

causes the processor to adjust the bias control supply to the power amplifier in response to the operating temperature signal causes the processor to adjust the bias control supply to the power amplifier in response to the operating temperature signal(see Winslow col. 5, lines 24-39).

As to claims 6,11, Winslow teaches transceiver for a radio telephone for sending and receiving radio signals within a communication network, the transceiver comprising: a power amplifier connected as part of the transceiver for amplifying the radio signals for transmission, the amplifier having at least one component with a transistor (see fig. 1, col. 3, lines 9-26, fig. 2, numbers 142, 144, 146, col. 3, lines 46-56); a bias supply circuit connected to the power amplifier for supplying a bias current to the power amplifier (see fig. 2, number 150, col. 4, lines 40-55, fig. 3, col. 5, lines 5-22); a processor for generating a signal indicative of the operating temperature of the power amplifier in response to the sensed voltage (see fig. 2, number 170, col. 4, lines 40-55, fig. 3, col. 5, lines 5-22). Winslow fails to teach a monitor connected to the power amplifier at the input of the bias supply circuit for sensing a voltage indicative of the voltage drop across the transistor. Budnik teaches a monitor connected to the power amplifier at the input of the bias supply circuit for sensing a voltage indicative of the voltage drop across the transistor (see col. 5, lines 60-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Budnik into the system of Winslow in order to improve the performance of the variable amplifiers.

As to claims 7-9; 12-14, the combination of Winslow and Budnik teaches a transceiver for a radio telephone for sending and receiving radio signals within a communication network, the transceiver, wherein a temperature control algorithm causes the processor to adjust the operation of the radio telephone in response to the operating temperature signal (see Winslow col. 5, lines 24-39); causes the processor to shut off the radio telephone when the operating temperature signal exceeds a predetermined value (see Winslow col. 4, lines 9-21, col. 6, lines 1-26); causes the processor to adjust the bias control supply to the power amplifier in response to the operating temperature signal (see Winslow col. 5, lines 24-39).

Allowable Subject Matter

Claims 5, 10, 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As to claim 5, the applied reference fails to teach a sensor system for obtaining the operating temperature of a power amplifier of a radio telephone, the power amplifier having at least one transistor wherein temperature control algorithm causes the processor to be responsive to the presence of RF signals in the power amplifier to delay the sensing of the operating temperature until after the RF signal slot has passed as cited in the claim.

As to claim 10, the applied reference fails to teach a transceiver for a radio telephone for sending and receiving radio signals within a communication network wherein temperature control algorithm causes the processor to be responsive to the

presence of RF signals in the power amplifier to delay the sensing of the operating temperature until after the RF signal slot has passed as cited in the claim.

As to claim 15, the applied reference fails to teach a method of obtaining the operating temperature of the power amplifier further comprising the step of sequencing the sensing of voltage in response to the presence of RF signals in the power amplifier and delaying the sensing of the voltage until said RF signals have passed as cited in the claim.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Opas et al (US 4,924,194) teaches RF power amplifier.

Iida et al (US 5,406,225) teaches bias control circuit for radio frequency power amplifier.

Gilbert et al (US 5,519,886) teaches method and apparatus for controlling device temperature during transmission.

Wieczorek (US 5,192,919) teaches transmitter having temperature adjust power amplifier.

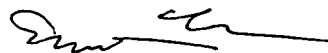
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhan T Le whose telephone number is 703-305-4538. The examiner can normally be reached on 08:00-05:00 (Mon-Fri).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on 703-305-4385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

N. Le

Nhan Le


EDWARD T. URBAN
Supervisor
Art Unit 2685
Patent and Trademark Office
U.S. Department of Commerce